COMPLETE LISTING OF CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Cancelled)

2. (Currently Amended) [[The]] A digital guitar ~~of claim 1,~~, comprising:

a guitar body;

guitar strings mounted on the guitar body;

a guitar pickup assembly mounted on the guitar body adjacent to the guitar strings, wherein the guitar pickup assembly includes a monophonic guitar pickup[.];

a digital guitar processing circuit connected to the guitar pickup assembly; and

a guitar digital output assembly connected to the digital guitar processing circuit.

3. (Original) The digital guitar of claim 2, wherein the monophonic guitar pickup is a humbucker guitar pickup.

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Currently Amended) [[The]] A digital guitar ~~of claim 1,~~, comprising:

a guitar body;

guitar strings mounted on the guitar body;

a guitar pickup assembly mounted on the guitar body adjacent to the guitar strings, wherein the guitar pickup assembly includes multiple guitar pickups[[.]];

a digital guitar processing circuit connected to the guitar pickup assembly; and

a guitar digital output assembly connected to the digital guitar processing circuit.

8. (Original) The digital guitar of claim 7, wherein the guitar pickup assembly includes two or more different types of guitar pickups.

9. (Original) The digital guitar of claim 8, wherein the guitar pickup assembly includes a monophonic and a multi-signal guitar pickup.

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Currently Amended) [[The]] A digital guitar ~~of claim 12,~~, comprising:

a guitar body;

guitar strings mounted on the guitar body;

a guitar pickup assembly mounted on the guitar body adjacent to the guitar strings;

a guitar digital output assembly;

a digital guitar processing circuit connected to the guitar pickup assembly and the guitar digital output assembly being connected to the digital guitar processing circuit, the digital guitar processing circuit including:

i. a guitar analog/digital converter circuit connected to the guitar pickup assembly and the guitar digital output assembly;

ii. a guitar digital communication circuit connected between the guitar analog/digital converter circuit and the guitar digital output assembly; and

iii. a guitar mixing circuit connected between the guitar analog/digital converter circuit and the guitar pickup assembly, wherein the guitar mixing circuit includes a summing circuit and a subtracting circuit, both of which are connected to the guitar pickup assembly, and a combining circuit connected to the summing and subtracting circuits and the guitar analog/digital converter circuit.

14. (Original) The digital guitar of claim 13, wherein the guitar mixing circuit includes a noise subtracting circuit connected to the guitar pickup assembly and between the summing circuit and the combining circuit.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Currently Amended) [[The]] A digital guitar ~~of claim 11,~~ , comprising:

a guitar body;

guitar strings mounted on the guitar body;

a guitar pickup assembly mounted on the guitar body adjacent to the guitar strings;

a guitar digital output assembly;

a digital guitar processing circuit connected to the guitar pickup assembly and the guitar digital output assembly being connected to the digital guitar processing circuit, the digital guitar processing circuit including:

i. a guitar analog/digital converter circuit connected to the guitar pickup assembly and the guitar digital output assembly; and

ii. a guitar digital communication circuit connected between the guitar analog/digital converter circuit and the guitar digital output assembly, wherein the guitar digital communication circuit includes an Ethernet interface.

20. (Currently Amended) [[The]] A digital guitar ~~of claim 11,~~ , comprising:

a guitar body;

guitar strings mounted on the guitar body;

a guitar pickup assembly mounted on the guitar body adjacent to the guitar strings;

a guitar digital output assembly;

a digital guitar processing circuit connected to the guitar pickup assembly and the guitar digital output assembly being connected to the digital guitar processing circuit, the digital guitar processing circuit including:

i. a guitar analog/digital converter circuit connected to the guitar pickup assembly and the guitar digital output assembly; and

ii. a guitar digital communication circuit connected between the guitar analog/digital converter circuit and the guitar digital output assembly, wherein the guitar digital communication circuit includes a MaGIC chip.

21. (Currently Amended) [[The]] A digital guitar ~~of claim 11,~~ , comprising:

a guitar body;

guitar strings mounted on the guitar body;

a guitar pickup assembly mounted on the guitar body adjacent to the guitar strings;

a guitar digital output assembly;

a digital guitar processing circuit connected to the guitar pickup assembly and the guitar digital output assembly being connected to the digital guitar processing circuit, the digital guitar processing circuit including:

i. a guitar analog/digital converter circuit connected to the guitar pickup assembly and the guitar digital output assembly; and

ii. a guitar digital communication circuit connected between the guitar analog/digital converter circuit and the guitar digital output assembly, wherein the guitar digital communication circuit includes an I2S Engine and sync.

22. (Original) The digital guitar of claim 21, wherein the I2S Engine and sync includes a field programmable gate array.

23. (Cancelled)

24. (Currently Amended) [[The]] A digital guitar ~~of claim 23, wherein,~~ comprising:

a guitar body;

guitar strings mounted on the guitar body;

a guitar pickup assembly mounted on the guitar body adjacent to the guitar strings;

a digital guitar processing circuit connected to the guitar pickup assembly;

a guitar digital output assembly connected to the digital guitar processing circuit; and

a guitar digital input assembly connected to the digital guitar processing circuit; and

the guitar digital output assembly and guitar digital input assembly are integrated together into a single guitar digital input/output assembly.

25. (Original)The digital guitar of claim 24, wherein the guitar digital input/output assembly includes an RJ-45 connector.

26. (Currently Amended) [[The]] A digital guitar ~~of claim 1,~~ , comprising:

a guitar body;

guitar strings mounted on the guitar body;

a guitar pickup assembly mounted on the guitar body adjacent to the guitar strings;

a digital guitar processing circuit connected to the guitar pickup assembly;

a guitar digital output assembly connected to the digital guitar processing circuit; and

~~further including~~ a guitar analog input/output assembly.

27. (Cancelled)

28. (Cancelled)

29. (Currently Amended) ~~The guitar of claim 28, wherein:~~ A guitar, comprising:

a guitar body;

a plurality of guitar strings mounted on the guitar body;

a pickup mounted on the body under the strings, the pickup generating at least one analog electrical string signal corresponding to vibration of the strings;

an analog to digital converter circuit mounted on the guitar, and operably associated with the pickup, for converting the analog electrical string signal to a digital electrical string signal;

a digital output connector, mounted on the guitar, for outputting the digital electrical string signal;

wherein

the pickup generates at least one analog electrical string signal for each string of the plurality of strings so that a plurality of analog electrical string signals is generated;

the analog to digital converter circuit converts the plurality of analog electrical string signals into a plurality of corresponding digital electrical string signals; and

the output connector outputs the plurality of digital electrical string signals.

30. (Currently Amended) ~~The guitar of claim 28, wherein:~~ A guitar, comprising:

a guitar body;

a plurality of guitar strings mounted on the guitar body;

a pickup mounted on the body under the strings, the pickup generating at least one analog electrical string signal corresponding to vibration of the strings;

an analog to digital converter circuit mounted on the guitar, and operably associated with the pickup, for converting the analog electrical string signal to a digital electrical string signal;

a digital output connector, mounted on the guitar, for outputting the digital electrical string signal; and

wherein the analog to digital converter circuit formats the digital electrical string signal in a MaGIC communication protocol format.

31. (Cancelled)

32. (Cancelled)

33. (Currently Amended) ~~The guitar of claim 28, wherein:~~ A guitar, comprising:

a guitar body;

a plurality of guitar strings mounted on the guitar body;

a pickup mounted on the body under the strings, the pickup generating at least one analog electrical string signal corresponding to vibration of the strings;

an analog to digital converter circuit mounted on the guitar, and operably associated with the pickup, for converting the analog electrical string signal to a digital electrical string signal;

a digital output connector, mounted on the guitar, for outputting the digital electrical string signal;

wherein

the pickup is a first pickup which generates at least one analog electrical string signal for each string; and

the guitar further includes:

a second pickup which generates one blended analog string signal corresponding to vibration of all of the strings; and

an analog output connector, mounted on the guitar, for outputting the blended analog string signal.

34. (Original) The guitar of claim 33, further comprising:

a volume control and a tone control, operatively associated with the analog to digital converter circuit, so that both the blended analog string signal and the digital electrical string signal can be modified by the volume control and the tone control.

35. (Cancelled)

36. (Cancelled)

37. (Cancelled)

38. (Currently Amended) ~~The guitar of claim 37,~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols, wherein the guitar processing circuit is adapted to format the digital string signals to be compatible with a single digital communication protocol[.]; and

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit.

39. (Currently Amended) ~~The guitar of claim 37~~A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols, wherein the guitar processing circuit is adapted to format the digital string signals to be compatible with a MaGIC digital communication protocol [.]; and

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit.

40. (Currently Amended) ~~The guitar of claim 37~~A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols, wherein the guitar processing circuit is adapted to format the digital string signals to be compatible with multiple different digital communication protocols [.]; and

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit.

41. (Currently Amended) ~~The guitar of claim 37~~A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols, wherein the guitar processing circuit is adapted to format the digital string signals to be compatible with a MaGIC digital communication protocol and a Musical Instrument Digital Interface digital communication protocol[.]; and

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit.

42. (Currently Amended) ~~The guitar of claim 37~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols; and

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit wherein the guitar output assembly includes an RJ-45 connector.

43. (Currently Amended) ~~The guitar of claim 37, further comprising~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

a guitar input assembly adapted to receive and transmit a predetermined number of external analog signals to the guitar processing circuit for processing; and

wherein

the guitar processing circuit is further adapted to generate a predetermined number of external digital signals based on the external analog signals and to format the external digital signals to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is further adapted to output the external digital signals.

44. (Currently Amended) ~~The guitar of claim 37, further comprising~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the

digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

a guitar input assembly adapted to receive and transmit an analog microphone signal to the guitar processing circuit for processing; and

wherein

the guitar processing circuit is further adapted to generate a digital microphone signal based on the analog microphone signal and to format the digital microphone signal to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is further adapted to output the digital microphone signal.

45. (Cancelled)

46. (Currently Amended) ~~The guitar of claim 37, further comprising~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

a guitar input assembly adapted to receive and transmit a predetermined number of external digital signals to the guitar processing circuit for processing; and

wherein

the guitar processing circuit is further adapted to generate a predetermined number of external analog signals based on the external digital signals; and

the guitar output assembly is further adapted to output the external analog signals.

47. (Currently Amended) ~~The guitar of claim 37, further comprising~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

a guitar control assembly adapted to generate and transmit a predetermined number of analog control signals to the guitar processing circuit for processing; and

wherein

the guitar processing circuit is further adapted to generate a predetermined number of digital control signals based on the analog control signals and to format the digital control signals to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is further adapted to output the digital control signals.

48. (Currently Amended) ~~The guitar of claim 37, wherein~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

wherein

the audio transducer assembly is further adapted to generate a predetermined number of analog noise signals representative of noise in one or more of the predetermined number of analog string signals; and

the guitar processing circuit is further adapted to generate the predetermined number of digital string signals based on the analog noise and string signals.

49. (Cancelled)

50. (Currently Amended) ~~The guitar of claim 37, wherein~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

wherein

the audio transducer assembly is adapted to generate a separate analog string signal for each guitar string that is strummed;

the guitar processing circuit is adapted to convert the separate analog string signals into separate digital string signals and to format the separate digital string signals to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is adapted to output the separate digital string signals.

51. (Currently Amended) ~~The guitar of claim 37, wherein~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

wherein

the audio transducer assembly is adapted to generate a separate analog string signal for each guitar string that is strummed;

the guitar processing circuit is adapted to process the separate analog string signals to generate a predetermined number of processed analog string signals, convert the processed analog string signals into processed digital string signals, and to format the processed digital string signals to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is adapted to output the processed digital string signals.

52. (Currently Amended) ~~The guitar of claim 37, wherein~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

wherein

the audio transducer assembly is adapted to generate a separate analog string signal for each guitar string that is strummed;

the guitar processing circuit is adapted to convert the separate analog string signals into separate digital string signals, to process the separate digital string signals to generate a predetermined number of processed digital string signals, and to format the processed digital string signals to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is adapted to output the processed digital string signals.

53. (Currently Amended)~~The guitar of claim 37, wherein~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

wherein

the audio transducer assembly is adapted to generate a separate analog string signal for each guitar string that is strummed;

the guitar processing circuit is adapted to combine the separate analog string signals to generate a single analog string signal, convert the single analog string signal into a single digital string signal, and to format the single digital string signal to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is adapted to output the single digital string signal.

54. (Currently Amended)~~The guitar of claim 37, wherein~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

wherein

the audio transducer assembly is adapted to generate a separate analog string signal for each guitar string that is strummed;

the guitar processing circuit is adapted to combine two or more of the separate analog string signals to generate a predetermined number of combined analog string signals, convert the combined analog string signals into a combined digital string signals, and to format the combined digital string signals to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is adapted to output the combined digital string signals.

55. (Currently Amended)~~The guitar of claim 37, wherein~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

wherein

the audio transducer assembly is adapted to generate two or more separate analog string signals for each guitar string that is strummed;

the guitar processing circuit is adapted to convert the separate analog string signals for each guitar string into separate digital string signals for each guitar string and to format the separate digital string signals to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is adapted to output the separate digital string signals for each guitar string.

56. (Currently Amended)~~The guitar of claim 37, wherein~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

wherein

the audio transducer assembly is adapted to generate two or more separate analog string signals for each guitar string that is strummed;

the guitar processing circuit is adapted to convert the separate analog string signals for each guitar string into a single combined digital string signal for each guitar string and to format the single combined digital string signal for each string to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is adapted to output the single combined digital string signal for each guitar string.

57. (Currently Amended)~~The guitar of claim 37, wherein~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

wherein

the audio transducer assembly is adapted to generate two or more separate analog string signals for each guitar string that is strummed;

the guitar processing circuit is adapted to generate an analog x-plane string signal and an analog y-plane string signal for each guitar string based on the separate analog string signals for each guitar string, convert the analog x-plane and y-plane string signals for each guitar string into digital x-plane and y-plane string

signals for each guitar string, and to format the digital x-plane and y-plane string signals for each string to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is adapted to output the digital x-plane and y-plane string signals for each guitar string.

58. (Currently Amended)~~The guitar of claim 37, wherein~~ A guitar, comprising:

an audio transducer assembly adapted to generate a predetermined number of analog string signals representative of string vibrations of guitar strings mounted on the guitar when the guitar strings are strummed;

a guitar processing circuit in communication with the audio transducer assembly, the guitar processing circuit adapted to generate a predetermined number of digital string signals based on the analog string signals and to format the digital string signals generated by the processing circuit to be compatible with a predetermined number of digital communication protocols;

a guitar output assembly in communication with the guitar processing circuit and adapted to output the digital string signals generated by the guitar processing circuit;

wherein

the audio transducer assembly is adapted to generate two or more separate analog string signals for each guitar string that is strummed;

the guitar processing circuit is adapted to:

generate an analog x-plane string signal and an analog y-plane string signal for each guitar string based on the separate analog string signals for each guitar string,

combine the analog x-plane and y-plane string signals for each guitar string to generate a single combined string signal for each guitar string;

convert the single combined string signal for each guitar string into a single digital combined string signal for each guitar string, and

format the single combined string signal for each string to be compatible with the predetermined number of digital communication protocols; and

the guitar output assembly is adapted to output the single combined string signal for each guitar string.

59. (Original) A retrofit method for converting a guitar from an analog guitar into a digital guitar, said method comprising the steps of:

(a) removing an analog output assembly from an analog guitar;

(b) inserting and mounting a digital guitar processing circuit inside the analog guitar;

(c) connecting the digital guitar processing circuit to a guitar pickup assembly of the analog guitar;

(d) connecting the digital guitar processing circuit to a digital output assembly; and

(e) mounting the digital output assembly on the analog guitar.

60. (Original) The method of claim 59, wherein step (e) occurs prior to step (d).

61. (Original) A retrofit method for converting a guitar from an analog guitar into a digital guitar, said method comprising the steps of:

(a) inserting and mounting a digital guitar processing circuit inside the analog guitar;

(b) connecting the digital guitar processing circuit to a guitar pickup assembly of the analog guitar;

(c) connecting the digital guitar processing circuit to a digital output assembly; and

(d) mounting the digital output assembly on the analog guitar.